

Technical data sheet Light curtain receiver Part no.: 50123280 CML730i-R05-880.A/D3-M12



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 changes

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Technical data

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Basic data

Basic data	
Series	730
Operating principle	Throughbeam principle
Device type	Receiver
Contains	2x BT-NC sliding block
Application	Detection of transparent objects
	Object measurement
Special version	
Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
Operating range	0.1 4.5 m
Operating range	Guaranteed operating range
Operating range, transparent media	0.1 1.75 m
Operating range limit	0.1 6 m
Operating range limit	Typical operating range
Measurement field length	880 mm
Number of beams	176 Piece(s)
Beam spacing	5 mm
Measurement data	
Minimum object diameter	10 mm
Electrical data	
Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data Supply voltage U _R	18 30 V, DC
Residual ripple	0 15 %, From U _B
Open-circuit current	$0 \dots 215 \text{ mA}$, The specified values refer
	to the entire package consisting of trans- mitter and receiver.
Inputs/outputs selectable Number of inputs/outputs selectable	2 Piece(s)
Type	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U _B / 0 V
Switching voltage, inputs	high: ≥6V
	low: ≤ 4 V
Input/output 1	
Time behavior	
Cycle time	1.91 ms
Response time per beam	10 µs
Interface	
Туре	RS 485 Modbus
DC 405	
RS 485 Function	Process
	100000
Service interface	
Туре	IO-Link

	IO-Link	
	Function	Configuration via software
		Service
С	onnection	
	umber of connections	2 Piece(s)
PI	ug outlet	Axial
	Connection 1	
	Function	Configuration interface
		Connection to transmitter
		Signal IN
		Signal OUT
		Voltage supply
	Type of connection	Connector
	Thread size	M12 Male
	Type Material	Metal
	No. of pins	8 -pin
	Encoding	A-coded
	Connection 2	
	Function	BUS IN
	Time of connection	BUS OUT Connector
	Type of connection Thread size	M12
	Туре	Female
	Material	Metal
	No. of pins	5 -pin
	Encoding	B-coded
Μ	echanical data	
D	esign	Cubic
D	esign mension (W x H x L)	29 mm x 35.4 mm x 955 mm
Di Di Hi	esign mension (W x H x L) ousing material	29 mm x 35.4 mm x 955 mm Metal
Di Di Hi	esign mension (W x H x L) ousing material etal housing	29 mm x 35.4 mm x 955 mm Metal Aluminum
Di Di Hi M	esign mension (W x H x L) ousing material etal housing ens cover material	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic
Di Di Hi M	esign mension (W x H x L) ousing material etal housing	29 mm x 35.4 mm x 955 mm Metal Aluminum
De De He M Le	esign mension (W x H x L) ousing material etal housing ens cover material et weight	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g
De De He M Le	esign mension (W x H x L) ousing material etal housing ens cover material et weight ousing color	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver
D D H H L C N H T	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting
D D D D D D D D D D D D D D D D D D D	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening peration and display	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device
D D D D D D D D D D D D D D D D D D D	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening peration and display	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED DLED display
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening peration and display rpe of display umber of LEDs	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s)
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening peration and display	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED DLED display
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening peration and display rpe of display umber of LEDs	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software
	esign imension (W x H x L) ousing material etal housing ens cover material eta weight ousing color rpe of fastening peration and display rpe of display umber of LEDs rpe of configuration perational controls	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening peration and display rpe of display umber of LEDs rpe of configuration	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
	esign imension (W x H x L) ousing material etal housing ens cover material eta weight ousing color rpe of fastening peration and display rpe of display umber of LEDs rpe of configuration perational controls	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening peration and display rpe of display umber of LEDs rpe of configuration perational controls nvironmental data	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard
	esign imension (W x H x L) ousing material etal housing ens cover material etal housing color repe of fastening peration and display repe of display umber of LEDs repe of configuration perational controls nvironmental data mbient temperature, operation mbient temperature, storage	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard
	esign imension (W x H x L) ousing material etal housing ens cover material etal housing ens cover material et weight ousing color rpe of fastening peration and display rpe of display umber of LEDs rpe of configuration perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color rpe of fastening peration and display umber of LEDs rpe of display umber of LEDs rpe of configuration perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device UED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color repe of fastening peration and display repe of display umber of LEDs repe of configuration perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection rotection class	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C
	essign mension (W x H x L) ousing material etal housing ens cover material et weight ousing color rype of fastening peration and display rype of display umber of LEDs rype of configuration perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection rotection class opprovals	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device UED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C
	esign imension (W x H x L) ousing material etal housing ens cover material et weight ousing color repe of fastening peration and display repe of display umber of LEDs repe of configuration perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection rotection class	29 mm x 35.4 mm x 955 mm Metal Aluminum Plastic 1,100 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C IIP 65 III c UL US

Technical data

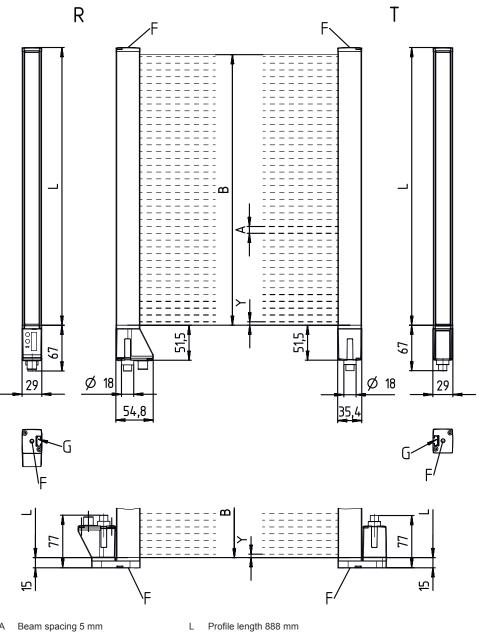
Customs tariff number	90314990
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ECLASS 12.0	27270910
ECLASS 13.0	27270910
ECLASS 14.0	27270910
ECLASS 15.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549
ETIM 10.0	EC002549

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Dimensioned drawings

All dimensions in millimeters



Beam spacing 5 mm А

- В Measurement field length 880 mm
- F M6 thread

G

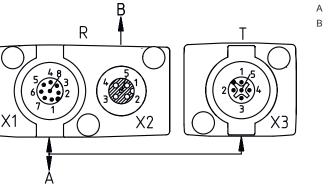
- Fastening groove
- Transmitter R Receiver
- Υ 2.5 mm

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Dimensioned drawings





A PWR / SW IN / OUTB BUS IN / OUT

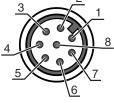
Electrical connection

Connection 1

Function	Configuration interface
i uncuon	-
	Connection to transmitter
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

Pin Pin assignment

1	V+		
2	I/O 1		
3	GND		
4	IO-Link		
5	I/O 2		
6	RS 485 Tx+		
7	RS 485 Tx+		
8	FE/SHIELD		



Connection 2

Function	BUS IN
	BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	B-coded

Electrical connection

PinPin assignment1V+2Tx-3PB GND4Tx+5FE/SHIELD

Operation and display

LED	Display	Meaning
1	Green, continuous light	Operational readiness
	Green, flashing	Teach / error
2	Yellow, continuous light	Light path free, with function reserve
	Yellow, flashing	No function reserve
	Off	Object detected

Suitable transmitters

 Part no.	Designation	Article	Description
50118586	CML730i-T05-880.A- M12	Light curtain transmitter	Operating range: 0.1 4 m Connection: Connector, M12, Axial, 5 -pin

Part number code

Part designation: CML7XXi-YZZ-AAAA.BCCCDDD-EEEFFF

CML	Operating principle Measuring light curtain
7XXi	Series 720i: 720i series 730i: 730i series
Y	Device type T: transmitter R: receiver
22	Beam spacing 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
AAAA	Measurement field length [mm], dependent on beam spacing
В	Equipment A: Axial connector outlet R: Rear connector outlet
ccc	Interface L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus



Part number code



DDD	Special equipment -PS: Power Setting	
EEE	Electrical connection M12: M12 connector	
FFF -EX: Explosion protection		
	Note	
A	∜ A list with all available device types can be found on the Leuze website at www.leuze.com.	

Notes

Observe intended use!
 This product is not a safety sensor and is not intended as personnel protection. The product may only be put into operation by competent persons. Only use the product in accordance with its intended use.



For UL applications:

 For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
 These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/ CYJV7 or PVVA/PVVA7)

Accessories

Connection technology - Connection cables

 Part no.	Designation	Article	Description
50132079	KD U-M12-5A-V1- 050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC

Connection technology - Y distribution cables

	Part no.	Designation	Article	Description
	50118183	K-Y1 M12A-5m- M12A-S-PUR	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Female, A-coded, 8 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 150 mm Sheathing material: PUR

Accessories

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Mounting technology - Mounting brackets

 Part no.	Designation	Article	Description
 50142900	BT 700M.5-2SET	Mounting device set	Design of mounting device: Bracket mounting Fastening, at system: Through-hole mounting, T slotted hole Mounting bracket, at device: Screw type, Sliding block Type of mounting device: Rigid Material: Steel

Services

	Part no.	Designation	Article	Description
ц. С	S981001	CS10-S-110	Start-up support	Details: Performed at location of customer's choosing, duration: max. 10 hours. Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses.
	S981005	CS10-T-110	Product training	Details: Location and content to be agreed upon, duration: max. 10 hours. Conditions: Price not including travel costs and, if applicable, accommodation expenses.

	Note
6	✤ A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.